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ABSTRACT

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Developmental Patterns in Affective Recognition:

Implications for Affective Education (HYP/POL)

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Implications for affective education are drawn from an empirical study of 60 upper-middle socioeconomic class 6 to 15 year-olds' responses to questions asking how videotaped actors felt. Percentage frequencies of category use in tape-recorded transcripts coded by two judges revealed no differences by child's sex. Marked developmental differences occurred between years 7½ and 9 and especially between 12 and 15. Piagetian, Wernerian, and learning theory frameworks were used to interpret results. The diversity in affective labels used by the subjects suggests that educators avoid communicating single "correct" responses to questions of how others feel.

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Development Patterns in Affective Recognition:
Implications for Affective Education

Introduction

Several programs in affective education have begun recently. While they may reflect individual differences in emphasis, a common objective of the programs is to provide students with information about their feelings and emotions (affective states) and the affective states of others. If one turns to the available empirical data concerning affective phenomena to gather material for curricula in affective education, several conclusions become apparent. First, very little is known of how children recognize affective states in actors who move and talk in realistic contexts. Second, most researchers assume there is a single, correct identification of an actor's affective state at a given point in time and judge subjects' affective recognition abilities in terms of the subjects' agreement with the correct identification. Third, basic emotions, such as happy and sad, are the easiest to identify, while angry, afraid, and disgusted are more difficult. And fourth, relatively few studies of affective phenomena exist.

Together these conclusions give little information, solace and insight to the prospective affective educator. Investigations of how children and adolescents recognize emotions and feelings in actors who move and talk in realistic contexts are needed. These investigations should be designed so that subjects may respond fully about what feelings and emotions the actor is experiencing. The actors, themselves, should display a wide range of feelings and emotions and not merely be either happy, sad, angry, or afraid. The research reported here

is designed to address these needs and to provide empirical data from which affective educators may draw implications for their curricula.

Literature Review

This literature review focuses on the various methods used to gather data on children's abilities to recognize affective states and highlights the central findings of those investigations in terms of the developmental pattern of emotional recognition, and the effect of the child's sex upon identifications. Relevance of the findings for learning, Piagetian and Wernerian theories, is discussed. The review concludes with the hypotheses of this investigation.

If one wanted to know what children's identifications of affective states were, how would one proceed? Some (Boring & Titchener, 1923; Buzby, 1924; Jarden & Fernberger, 1926) have shown children drawings and asked, "How do you think the person feels?" Others (Gates, 1923; Odom & Lemond, 1972) use photographs, while still others (Feshbach & Roe, 1968; Gitter, Mostofsky & Quincy, 1971) use photographic slides. Instead of asking how the person in the photograph, drawing, or slide feels, Buzby (1924) has given subjects a list of emotions and asked them to select from the list the emotion the portrayed figure is feeling.

The advantages of these procedures are that they give the subject a precise portrayal to judge, responses are easily scored, and subjects do not have to verbalize much, or at all (Borke, 1971). Disadvantages are that the findings are not safely generalized to situations in which actors move and talk and subjects are limited in what they may say especially if the "correct answer" is identified from a previously composed list.

Flapan (1965; 1968) correctly estimated the advantages and disadvantages of the previously described methods and sought to overcome the limitations while retaining most of the advantages. To do this, Flapan used live film portrayals of a boy and a girl, and the girl's mother and father. She asked 6, 9 and 12 year-old girls to describe what happened in the two films, each of which was divided in five episodes (to prevent later incidents from influencing earlier judgments and to minimize memory effects). The children were also asked how the actors felt at specific points in the videotape. Responses were written by Flapan, but subjects had freedom to say whatever they chose. Flapan's procedure allows for more secure generalization of findings, for the filmed subjects moved, talked, and acted in a realistic context (they were professional actors and the episodes were taken from a theatrical film) and in this sense her work is a distinct improvement over the previously discussed methods.

Whatever the method, results are consistent. Happy and sad are the easiest emotions to identify, with angry and afraid next easiest (Burn & Cavey, 1957; Borke, 1973; Walton, 1936). Generally there are no differences between boys' and girls' abilities to recognize how others feel (Borke, 1971; Borke & Su, 1972; Gates, 1923; Rothenberg, 1970). Flapan's study, allowing as it did for latitude in children's responses, also indicates that children respond with more than emotions when asked how an actor feels. They also will offer more purely "cognitive" responses to questions asking how actors feel (e.g., "he felt he wanted to, but felt the girl needed discipline," "she felt she was thinking of what happened in the afternoon").

The relevance of the findings to Werner's (1948) theory is striking. According to Werner, development is characterized by increasing differentiation and hierarchical integration. The results suggesting that development proceeds from general affective states (happy and sad) to more differentiated affective states (angry, afraid, worried) and then to references to cognitive states may be interpreted to support Werner's contention of increasing differentiation and hierarchical integration of the cognitive and the affective.

Piaget (1954) also argues for the inseparability of cognitive and affective processes, even though the majority of his work focuses on the cognitive aspects of development. Since most of the investigations reviewed here asked children to verbalize their identifications of other's affective states, there is, of necessity, a cognitive component involved in their responses. A learning theory approach presumably would highlight the impact of cognitive factors, particularly verbal skills, and argue that the differences between the younger and older children's responses is explained with reference to the better vocabulary of the older children. The difficulty with this explanation, however, is that girls are generally recognized to have better verbal skills than boys, yet there are few sex differences in recognitions of how others feel in young children, although the evidence does indicate that differences occur among older subjects.

With these theoretical considerations in mind, the investigation reported here was designed to test the hypotheses that: emotional recognition develops from recognition of general affective states to identifications of more complex emotions and that there would be no

differences in recognitions of boys and girls less than twelve years of age, but that beginning at age twelve differences would appear.

Methods

Subjects were of predominantly middle and upper-middle socioeconomic background. All subjects lived in suburbs of Boston; children at the three youngest age groups (6, 7½ and 9 years) attended a summer day camp, while those in the two older age groups (12 and 15 years) attended a junior and a senior high (respectively) in another Boston suburb. Half of the subjects at each age (N=6) were boys and half (N=6) were girls. The sixty subjects were asked if they wished to view a television program and answer some questions about it.

Procedure

Subjects were individually interviewed after seeing each of five segments of a videotaped version of the film Flapan had used in her research. Some of the questions Flapan had used were included in the interview and they are identified by an asterisk in Table 1, which

(Insert Table 1 about here)

lists all interview questions. The interviews were taped and analysis focused on the typed transcripts resulting from the thirty minute discussions.

Data Analysis

A review of theory concerning emotions (Arnold, 1960; Beebe-Center, 1932; Cannon, 1929; Davitz, 1969; Dewey, 1894-95; Piaget, 1954, 1967; Schachter, 1964; Tomkins, 1962, 1963; Woodworth and Schlosberg, 1954; and, Young, 1961) indicates clearly one major problem in the area: definition. Many papers discussing the differences, if any, between emotions and feelings have been written and various definitions of "the affects," "feelings,"

and "emotions" exist. For this reason, one central purpose of this investigation was to describe as precisely as possible how children define affective phenomena. Their definitions were contained in responses to the question stem "How did (a given actor) feel (at a given point in the videotape)?" Whatever the child said in response to this stem was considered appropriate data for analysis. To perform the analysis as "precisely" as possible, separate categories were generated from the data. That is, they were formulated after the data were collected. Another judge was trained to score the transcripts and coefficient of reliabilities were determined (.79) based on a clause-by-clause analysis of each subject's response. The nine categories of affective recognition are presented in Table 2. Analysis focused on the percentage frequency each of these

(Insert Table 2 about here)

categories was used.

Results

Results indicate that hypothesis one is supported (i.e., development moves from recognition of simple, global affective states such as happy and sad, to more complex, specific affective states, such as guilty, nervous and upset), but hypothesis two is disconfirmed (that is, there were no sex differences at all ages studied, whereas it had been predicted that differences would first appear at age 12).

In more detail, I shall review six sets of findings. To begin, a review of the number of different emotions mentioned in response to the questions listed in Table 1 indicates that six-year-olds mentioned the fewest different emotions, fifteen-year-olds the most, there is little

differences between the 7½, 9 and 12 year-olds, and the biggest change occurs between the 12 and 15 year-olds (Table 3). There were no differences in the number of emotions mentioned by boys or girls.

(Insert Table 3 about here)

Second, as Table 4 indicates, an examination of the number of emotions used in an identification of an affective state reveals that most children use a single emotion to identify how the actor feels. The older the child, however, the less likely one label will be used and the more likely two labels will be used. It is interesting to note that older children are also more likely to use no emotional labels in

(Insert Table 4 about here)

identifying another's affective state. Again, there were no differences in boys' and girls' response patterns.

A third finding indicates that approximately half the subjects at all ages studied gave a unique identification of the actor's affective state. That is, when twelve children were asked how an actor felt, six gave an identification that no other child mentioned (Table 5).

(Insert Table 5 about here)

As mentioned previously, older children were more likely to give no emotional labels in referring to an actor's affective state. Instead, they were more likely either to give two emotional labels, or more importantly, to refer to the actor's cognitive state (Table 6). In particular, four types of cognitive references occurred. Subjects

(Insert Table 6 about here)

referred to the actor's General thoughts (e.g. "He thought he knew the answer."), Intentions (e.g. "He wanted to go to the circus."), Moral Judgments (e.g. "he thought she was doing the wrong thing by not giving the boy the skates.") In addition, subjects responded to questions asking how an actor feels by simply reporting actions in the videotape (e.g. "He went over to the girl.") There were no sex differences between 6 and 7½ year-olds. Differences did appear between 7½ and 9 year-olds and especially between 12 and 15 year-olds.

The only analysis significantly revealing sex differences is in the use of non-responsive remarks. These remarks (e.g. "I don't know," or restating the question) occur overwhelmingly at the three youngest age groups. Boys use non-responsive remarks in 15% of their comments, girls do so in 5% of their responses.

The sixth analysis relates directly to the hypothesis suggesting which emotions are preferred by children at the various ages studied. It had been predicted that young children would use global emotions, older children would refer to more specific affective states. Table 7 indicates that five emotions (happy, mad, angry, sad and good) were used four or more times (often) by 6 year-olds. Only three emotions were often used by 7½ year-olds (sad, bad, and happy). Twelve-year-olds frequently referred to bad, happy, mad and ashamed, while 15 year-olds often

(Insert Table 7 about here)

mentioned happy and hurt. Thus, it appears that happy is the only emotion often used by all age groups. Sad is mentioned often only by the 6, 7½ and 9 year-olds, after age 9 sad is rarely mentioned. Bad, mad,

ashamed and hurt are often mentioned by older groups. Age, therefore, apparently is associated with preferences for frequently mentioned emotions. Changes appear to be greatest after age 9, particularly between 12 and 15.

No matter what age studied, happy was the first or second most frequently mentioned emotion (Table 8). While somewhat less often mentioned, mad was nevertheless still a frequently used label for another's state at all ages. Sad, on the other hand, appeared to be a "young emotion," much more frequently used by 6, 7½ and 9 year-olds than by adolescents. Conversely, guilty, excited and upset are "older" emotions, which 12 and 15 year-olds are more likely to use.

Much of this analysis depends upon decisions on how to score and tabulate data. Because different investigators undoubtedly would tabulate the data in other ways, it is difficult to offer definite conclusions about how preferences for various emotions vary as a function of the child's age. It is clear, however, that some emotions are rarely mentioned by young children (e.g. guilty, upset, nervous) and only appear in older children's and adolescents' identifications of actors' affective states.

Discussion: Implications of the Results for Programs in Affective Education

Although Werner's and Piaget's writings suggest the interrelationships of cognition and affect, these data indicate that initial development proceeds from separate global categories, one principally concerning cognition and the other focusing on affect (feelings and emotions). With this in mind, it appears as if the Wernerian contention that development moves from global, undifferentiated states to more specific, hierarchically integrated conceptions is generally supported by the data reported here. Further, Piaget's insistence on the inseparability of cognition and affect

also is demonstrated particularly with the increasing references to the actor's cognitive state by the older subjects. While cognitive processes are obviously involved whenever one questions subjects about how others feel, there is apparently less of an integration between cognitive and affective references in the responses of younger subjects.

The question of whether any educational program to affect children's affective development may be devised is not resolved by this work. The extent to which Piagetian and Wernerian frameworks account for the data directly relates to the issue of potential educational intervention. If differences between children are explained with references to different learning histories, then educational programs based on learning theory models may affect children's affective development. But if, as appears to be the case here, structural differences occur with development, then affective development is less likely to be affected by direct teaching.

What then are the implications of this investigation for those who want to teach in affective education? While there may be several implications which may be drawn from the research, four are discussed here. These implications are far from confirmed fact, but they seem the most securely stated inferences from these data and from the previously reviewed investigations.

It seems as if affective education programs should be designed to avoid communicating single, correct identifications of how people feel. Thus, if children are shown drawings, photographs, slides, films, or videotapes and asked how the actors feel, teachers should avoid having the class arrive at a consensus. Instead, if one child says the actor is

sad and another says the actor is feeling bad, while a third says the actor is worried, the teacher could initiate a discussion on what the differences are among these emotional states. This type of discussion is preferable to an attempt to have the class agree that the actor is feeling any one emotion. The teacher could also point out that different children looking at the same actor think the actor feels different things. The child may begin to recognize that when people look at him or her, they may differ in how they think the child feels. In short, the lessons are one hundred eighty degrees removed from math or spelling lessons, for instead of a single correct solution or spelling, there are numerous "correct" answers. When children (and adults) recognize the wide range of interpretations people give to other's affective states, then an essential first lesson in affective education is well-learned.

A second implication from the data is that affect (feelings and emotions) and cognition (references to other's thoughts, moral judgments, intentions) are related in children's minds, and become increasingly integrated with development. The lesson then is to focus on discussions of why people may feel as they do. These discussions should make explicit that people's feelings are very much associated with what they think, want, and value. It should also be clear that there are situational, behavioral and psychological clues that people may, and should, use to identify how others feel. This is to say that people's feelings also depend on what situations they are in, how the people look (facial and bodily expression) and what "kind of people" they are (e.g., often sad, often optimistic, often worried).

One other point about the integration of affect and cognition. If developmental investigations indicate that the thoughts and feelings of children are interconnected, then it is hard to see how curricula focusing exclusively on developing children's thoughts (and avoiding consideration of how they feel) can exist without accompanying curricula addressing children's feelings and emotions.

A third implication follows from the clearly identified developmental differences discussed earlier. Responses of 6- and 7½ year-olds generally are similar, but their identifications of how the actors feel differs markedly from the 9-year-olds' comment. Marked changes also occur between 12- and 15-year-olds. In short, the child's age affects the child's interpretations of how other's feel. The implication of this for programs in affective education is to suggest to teachers that fully developed affective recognition may be beyond young children's cognitive capacities. Full understanding of certain emotions (e.g., upset, nervous, guilt) may be impossible for young children. Full understanding that thoughts and feelings are intimately associated may also be beyond young children's cognitive capacities. While clearly more research is needed to clarify how accurate these data are, it is at this point in our understanding advisable to avoid expecting young children (or even children less than 12-years-old) to have the same abilities to recognize how others feel as older children, adolescents and adults have.

Finally, while it may very well be that boys and girls react to their feelings and emotions in different ways, the data reported

here imply that they do not differ in how they identify other's affective states. Consequently, despite the stereotype that "girls are more emotional than boys," (a stereotype challenged by data reported in Gordon, 1976), it is advisable to design programs focusing on affective recognition that are identical for boys and girls.

Summary

The data reported here imply that affective education stress: how variable people's interpretations of other's affective states are; how much cognition and affect are interrelated; how important it is to consider how the child's cognitive abilities may affect his or her interpretation of another's feelings; and, how similar boys' and girls' interpretations of other's affective states are.

Undoubtedly, some on-going programs in affective education already reflect the suggestions offered here and to the extent that this occurs the programs are consonant with these data and interpretations. This paper should not be taken as an indictment of affective education programs. Instead, it is hoped that this work illustrates the advisability of cooperation between researchers interested in affective development and educators interested in teaching about feelings, emotions, and thoughts.

Table 1List of Emotional Recognition QuestionsFor Episode 1

1. How do you think the girl felt after the boy said, "you're a big pig and you eat slop?"
2. How do you think the boy felt after the girl said she wasn't going to give him a turn?
- *3. How do you think the mother felt when she looked out the window and said to let the boy have the skates?
4. How did the boy feel when the girl pushed him down?

For Episode 2

- *5. How do you think the girl felt when she took off the skates and said she was going to bed without any supper?
- *6. How do you think the father felt after he gave the skates to the boy and after the girl went into the house?
- *7. How do you think the boy felt after the father gave him the skates?

For Episode 3

8. How do you think the father felt when he was reading the newspaper?
- *9. How do you think the father felt when the girl asked to kiss him goodnight?
10. How do you think the girl felt when the father wouldn't let her kiss him?

For Episode 4

11. How did the girl feel when she first saw the elephant?
- *12. How do you think the girl felt while she was on the elephant?
- *13. How do you think the father felt when the girl was on the elephant?
14. How do you think the elephant felt when it was on its side? What other things can elephants feel?

For Episode 5

- *15. How do you think the girl felt as she and her father were driving home?

Categories of Affective Recognition

The purely emotional response contained a one-word specific feeling or emotion to indicate how the actor felt. Comments which said how an actor felt were coded as a Specific Feeling or Emotion. Appendix B lists all the emotions mentioned.

Subjects used a specific feeling or emotion in a negative sense, indicating that the actor did not feel that emotion, these were coded as Negatively Stated Affects and examples are, "He didn't feel happy," or "She didn't feel too good" or "He wasn't bothered."

Metaphoric or figuratively phrased emotions appeared in response to emotional recognition questions. For example, I asked, "How did the mother feel when she looked out the window?" and received these examples of Figuratively Phrased Emotions: "She felt like a heel," or "She felt like a bum."

All other responses were considered to be "thoughts" the child attributed to an actor, although one can see a possible continuum operating in that emotions and thoughts are bridged by the Figuratively Phrased Emotions, which are part thought and part emotion. The most general kinds of thoughts were labelled References to general thoughts or knowledge of an actor. If none of the three emotional responses was applicable, this category was considered, although it was only used if none of the next, more specific references of types of thoughts were applicable. This explains why the adjective "general" was applied to this category. Examples are, "He didn't feel like he knew what to do," or "He felt that that takes care of that."

Of the four types of specific thoughts, the first (Intentions) referred to intentions, desires, wants, wishes, and motivations (issues concerned with "trying"). Examples are: "He felt like he wanted the skates," or "He wanted to be dominant over her," or "He felt like forgiving her."

A second type of specific thought focused on moral obligations or moral judgments. Responses suggesting what an actor should do, or what one actor thinks another actor should have done or ought to have done were coded here. Examples are: "He felt like he didn't handle the situation right," or "He felt that she didn't deserve to get a kiss," or "He felt he shouldn't have done that."

References to interpersonal perceptions formed the third of the more specific thoughts. An "interpersonal perception" was the child's judgment of how one actor interpreted another actor's thoughts, feelings or anticipations. Examples are, "He felt that she didn't know what to do," or "He felt like she was thinking of him."

Table 2 (continued)

The final specific type of thought the child might attribute to an actor was an actor's evaluation of himself or of another actor's personality. An example is, "She felt that her daughter was selfish." This category did not apply to judgments one actor might make of another actor's actions. The response, "She felt she was doing wrong things" is an evaluation of an actor's actions, not of an actor's personality. The response is coded as a moral obligation or moral judgment (of what was right or wrong).

There were occasions when the child's complete response to an emotional recognition question was, "I don't know." At other times the question might not have been asked or if asked, the response may have been unintelligible or non-recorded. In all instances of this type, the response was coded in a Non-responsive category.

Table 3Number of Different Emotions Mentioned By Age

<u>Age</u>	6	7½	9	12	15
<u>Number of</u>					
<u>Emotions</u>	32	39	35	37	65

Table 4Percentage of Subjects Mentioning
1-3 Emotions

<u>Age</u>	<u># of emotions mentioned</u>			
	0	1	2	3
6	21	71	8	0
7½	14	71	12	4
9	21	63	14	1
12	27	51	21	1
15	28	45	22	6

Table 5

Percentage of Subjects Mentioning
Unique Combinations of Emotions by Age

<u>Questions</u>	<u>Age groups</u>				
	<u>6</u>	<u>7½</u>	<u>9</u>	<u>12</u>	<u>15</u>
1	67	67	83	92	83
2	50	33	42	42	67
3	33	33	33	25	25
4	67	58	58	58	50
5	50	58	50	75	42
6	75	58	75	25	58
7	75	67	33	42	42
8	33	67	58	75	75
9	58	67	42	67	67
10	33	42	33	33	33
11	25	42	33	58	75
12	33	33	33	42	58
13	33	42	42	67	50
14	42	42	50	75	67
15	33	50	33	42	58
$\bar{x} =$	47	51	47	55	57

Table 6

Percentage of Comments Coded in
Cognitive Categories by Age

<u>Age</u>	<u>General thought</u>	<u>Intention</u>	<u>Moral judgment</u>	<u>Report of action</u>
6	2	6	1	5
7½	2	7	4	3
9	20	9	13	22
12	26	20	32	32
15	49	58	50	38
Total coded comments	303	118	137	135

Table 7

Emotions Mentioned Four or More Times by Age Groups

Age Group	4	5	6	10	11	12	14	17	18	37
6	mad	angry	good	happy			sad			
7					happy		bad			sad
9				bad sad					happy	
12	bad	ashamed				happy		mad		
15	happy hurt (mental) upset									

Table 3Emotional Labels Preferred by Children at Each Age

6		7½		Age 9		12		15	
Label	% usage	Label	% usage	Label	% usage	Label	% usage	Label	% usage
happy	19	sad	23	happy	19	happy	15	guilty	10
sad	17	happy	15	bad	13	mad	12	happy	7
angry	10	mad	12	sad	11	bad	9	mad	7
bad	9	bad	11	scared	9	guilty	9	scared	6
mad	8	scared	6	mad	7	excited	6	upset	5

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